03050110-020
(Congaree Creek)

General Description

Watershed 03050110-020 is located in Lexington County and consists primarily of *Congaree Creek* and its tributaries. The watershed occupies 91,326 acres of the Sandhills region of South Carolina. The predominant soil types consist of an association of the Lakeland-Blaney-Fuquay series. The erodibility of the soil (K) averages 0.10; the slope of the terrain averages 5%, with a range of 2-15%. Land use/land cover in the watershed includes: 34.59% urban land, 5.61% agricultural land, 6.60% scrub/shrub land, 0.11% barren land, 46.84% forested land, 5.29% forested wetland (swamp), and 0.96% water.

The Congaree Creek watershed drains into the Congaree River near the City of Cayce. West Fork and East Fork join to form Scrouter Branch, which flows through Redmond Pond and Shealy Pond to enter Congaree Creek near its origin. Congaree Creek then flows through Hunt Pond before accepting the drainage from Red Bank Creek (Turkey Creek, Crystal Lake, Lick Fork Branch, Pole Branch). Second Creek (Hunt Branch, Bear Creek, Reedy Branch) flows into First Creek, which in turn drains into Congaree Creek. Congaree Creek also accepts the drainage from Savana Branch (Pitts Lake), Sixmile Creek (Lake Caroline), and Dry Creek. There are a total of 110.5 stream miles in this watershed, all classified FW, together with numerous recreational ponds. Another natural resource in the watershed is the Peachtree Rock Nature Preserve, located at the headwaters of Hunt Branch.

Water Quality

Station #	Type	Class	Description
C-580	BIO	FW	RED BANK CK AT ROAD CONNECTING SR 1260 & SR 243
C-066	S	FW	RED BANK CREEK AT S-32-244
C-067	S	FW	RED BANK CK AT SANDY SPRINGS RD BETWEEN S-32-104 & SC602
C-565	BIO	FW	CONGAREE CREEK AT SR 34
C-061	S/BIO	FW	SAVANA BRANCH AT S-32-72 1.7 MI NNW OF S CONGAREE
C-008	P	FW	CONGAREE CREEK AT US 21, AT CAYCE WATER INTAKE
C-025	S	FW	LAKE CAROLINE SPILLWAY AT PLATT SPRINGS RD
C-005	S/BIO	FW	SIXMILE CREEK ON US 21, S OF CAYCE
C-070	W	FW	CONGAREE CREEK AT S-32-66
C-583	BIO	FW	SECOND CREEK AT SR 647

***Congaree Creek* - There are three monitoring sites along Congaree Creek, which was Class B until April, 1992. Aquatic life uses are fully supported at the upstream site (C-565) based on macroinvertebrate community data. At the midstream site (C-008), aquatic life uses are not supported due to occurrences of copper in excess of the aquatic life acute standards, including a very high concentration measured in 1993. In addition, there are significant increasing trends in pH, turbidity, and total suspended solids concentrations. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although pH excursions occurred, they were considered typical values for these systems. The increasing trend in pH, however, suggests changing conditions in the stream. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentration. Aquatic life and recreational uses are fully supported at the downstream site (C-070), which is also a blackwater system characterized by naturally low pH and dissolved oxygen concentrations.**

Red Bank Creek **- There are three monitoring sites along Red Bank Creek. At the upstream site (C-580), aquatic life uses are fully supported based on macroinvertebrate community data. Aquatic life uses are also fully supported at the midstream site (C-066) and downstream site (C-067), but there are significant increasing trends in pH and turbidity. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although pH excursions occurred, they were considered typical values for these systems. The increasing trend in pH, however, suggests changing conditions in the stream. A significant decreasing trend in total phosphorus concentration at the midstream site suggests improving conditions for this parameter. Recreational uses are fully supported at the midstream site and partially supported downstream, but there is a significant increasing trend in fecal coliform bacteria concentration.**

Savana Branch (C-061) **- Aquatic life uses are fully supported based on macroinvertebrate community data, but there are significant increasing trends in pH and turbidity. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although pH excursions occurred, they were considered typical values for these systems. The increasing trend in pH, however, suggests changing conditions in the stream. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. Recreational uses are fully supported, but there is a significant increasing trend in fecal coliform bacteria concentration.**

Sixmile Creek (C-005) **- This stream was Class B until April, 1992. Aquatic life uses are partially supported based on macroinvertebrate community data, compounded by a significant increasing trend in turbidity. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although pH excursions occurred, they were typical of values seen in such systems. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions.**

Lake Caroline (C-025) **- This lake was Class B until April, 1992. Aquatic life uses are fully supported, but there is a significant increasing trend in turbidity. A significant increasing trend in dissolved oxygen concentration and significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. Recreational uses are not supported due to fecal coliform bacteria excursions.**

Second Creek (C-583) **- Aquatic life uses are fully supported based on macroinvertebrate community data.**

Permitted Activities

Point Source Contributions

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)* *COMMENT*	*NPDES#* *TYPE* *LIMITATION*
RED BANK CREEK **TOWN OF LEXINGTON/OLD BARNWELL** **PIPE #: 001 FLOW: 0.8** **WQL FOR NH3-N, TRC**	**SC0023680** **MINOR MUNICIPAL** **WATER QUALITY**
RED BANK CREEK **TOWN OF LEXINGTON/TWO NOTCH ROAD** **PIPE #: 001 FLOW: 0.4** **WQL FOR NH3-N, TRC**	**SC0040789** **MINOR MUNICIPAL** **WATER QUALITY**
FIRST CREEK **GLENN VILLAGE/CAROLINA WATER** **PIPE #: 001 FLOW: 0.1284** **WQL FOR NH3-N, DO, TRC, BOD5**	**SC0030651** **MINOR DOMESTIC** **WATER QUALITY**
BEAR CREEK **LEXINGTON COUNTY/EDMUND LANDFILL** **PIPE #: 001 FLOW: 0.0554** **WQL FOR NH3-N, TRC, BOD5**	**SC0045110** **MINOR INDUSTRIAL** **WATER QUALITY**
SAVANA BRANCH **LOXCREEN COMPANY** **PIPE #: 001 FLOW: 0.0045** **WQL FOR NH3-N**	**SC0003174** **MINOR INDUSTRIAL** **WATER QUALITY**
SIXMILE CREEK **STAR ENTERPRISE/EDMUND RD** **PIPE #: 001 FLOW: M/R**	**SCG830014** **MINOR INDUSTRIAL** **EFFLUENT**
SIXMILE CREEK **SOUTHERN PLASTICS CO.** **PIPE #: 001 FLOW: 0.182**	**SCG250129** **MINOR INDUSTRIAL** **EFFLUENT**
SIXMILE CREEK **SOLAR FARMS** **PIPE #: 001 FLOW: 0.026** **WQL FOR TRC**	**SC0039021** **MINOR INDUSTRIAL** **WATER QUALITY**
SIXMILE CREEK **S.C. FIRE ACADEMY** **PIPE #: 002 FLOW: 0.108**	**SC0039225** **MINOR INDUSTRIAL** **EFFLUENT**
SIXMILE CREEK **RACETRAC SERVICE STATION** **PIPE #: 001 FLOW: 0.0432** **WQL FOR BOD5, TOXICS**	**SCG830022** **MINOR INDUSTRIAL** **WATER QUALITY**
SIXMILE CREEK **COLUMBIA METROPOLITAN AIRPORT**	**SCR002109** **MINOR INDUSTRIAL**

PIPE #: 001 FLOW: 0.00864 **EFFLUENT**
STORMWATER

SIXMILE CREEK **SCG830021**
AMOCO SERVICE STATION **MINOR INDUSTRIAL**
PIPE #: 001 FLOW: 0.0144 **WATER QUALITY**
WQL FOR BOD5, TOXICS

SIXMILE CREEK **SC0030473**
PARKWOOD MHP **MINOR DOMESTIC**
PIPE #: 001 FLOW: .035 **WATER QUALITY**
WQL FOR NH3-N, DO, TRC, BOD5

LAND APPLICATION **PERMIT#**
FACILITY NAME **TYPE**

SPRAYFIELD **ND0067075**
WINDY HILL WWTP **COMMUNITY**

Landfill Activities

SOLID WASTE LANDFILL NAME ***PERMIT #***
FACILITY TYPE ***STATUS***

LEXINGTON COUNTY LANDFILL **DWP-127**
DOMESTIC **CLOSED**

LEXINGTON COUNTY **CWP-044**
C&D LANDFILL **ACTIVE**

LEXINGTON COUNTY LANDFILL (321 SITE) **DWP-030**
DOMESTIC **CLOSED**

SOUTHEASTERN CONCRETE **NWP-005**
INDUSTRIAL **ACTIVE**

U.S. #1 FLEA MARKET **NWP-003**
INDUSTRIAL **CLOSED**

Mining Activities

MINING COMPANY ***PERMIT #***
MINE NAME ***MINERAL***

BOWERS LEASING **0637-32**
BOWERS MINE **SAND**

RICHTEX CORPORATION **0184-32**
SOX MINE **KAOLIN**

CAROLINA MATERIALS CORPORATION **0787-32**
I-20 PIT **SAND**

B&T SAND COMPANY, INC. **0947-32**
BLEDSOE MINE **SAND**

CAROLINA MATERIALS CORPORATION **0608-32**
RED BANK PIT **SAND/CLAY**

B&T SAND COMPANY, INC. **HWY 6 MINE**	**0741-32** **SAND**
LEXINGTON COUNTY **RED BANK PIT**	**0505-32** **SAND/CLAY**
LA BARRIER & SON, INC. **EDMUND MINE**	**0958-32** **SAND**
JC TINDAL SAND COMPANY **TINDAL MINE**	**0535-32** **SAND**
US SILICA **COLUMBIA MINE**	**0150-32** **SAND**
COLUMBIA SILICA SAND COMPANY, INC. **SHULER MINE #2**	**0010-32** **SAND**
COLUMBIA SILICA SAND COMPANY, INC. **TRUCK PIT**	**0009-32** **SAND**
FOSTER-DIXIANA SAND COMPANY **GASTON MINE**	**1139-32** **SAND**

Camp Facilities

FACILITY NAME/TYPE ***RECEIVING STREAM***	***PERMIT #*** ***STATUS***
YMCA CAMP/RESIDENT **RED BANK CREEK**	**32-305-0001** **ACTIVE**
CONGAREE GIRL SCOUT CAMP/RESIDENT **SCOUTER BRANCH**	**32-305-0110** **ACTIVE**
CAMP BARSTOW/RESIDENT **FIRST CREEK**	**32-305-0002** **CLOSED**

Water Supply

WATER USER (TYPE) ***WATERBODY***	***REGULATED CAPACITY (MGD)*** ***PUMPING CAPACITY (MGD)***
CITY OF CAYCE (M) **CONGAREE CREEK**	**6.0** **16.0**
US SILICA/PENN GLASS SAND(I) **FIRST CREEK**	**1.44** **1000 GPM**
US SILICA/PENN GLASS SAND(I) **SECOND CREEK**	**9.5** **6600 GPM**
US SILICA/PENN GLASS SAND(I) **SECOND CREEK**	**0.72** **500 GPM**
US SILICA/PENN GLASS SAND(I) **SECOND CREEK**	**0.94** **650 GPM**

Groundwater Concerns

The groundwater in the vicinity of the property owned by the S.C. Fire Academy is contaminated with volatile organics and petroleum from spills and leaks. The groundwater recovery system has been constructed, and contaminated soils from burn pit areas are being removed. The surface water affected by the groundwater contamination is Sixmile Creek.

Growth Potential

There is a high potential for growth in this watershed, primarily commercial and residential. Expansion of the industrial base is also expected. There are several major highways bisecting the watershed, together with the Columbia Metropolitan Airport and a rail line to aid transportation related growth. Water is available in the urbanized areas and can be easily extended by the Cities of West Columbia and Cayce; however, sewer is not widely available and will require a major investment. Two Notch Road and Old Barnwell WWTPs (under Lexington County Joint Municipal Water and Sewer Commission) are targeted for elimination under the 208 Plan, with effluent transported to the City of Cayce's WWTP. The construction of the line to Cayce could have the effect of making sewer more readily available.